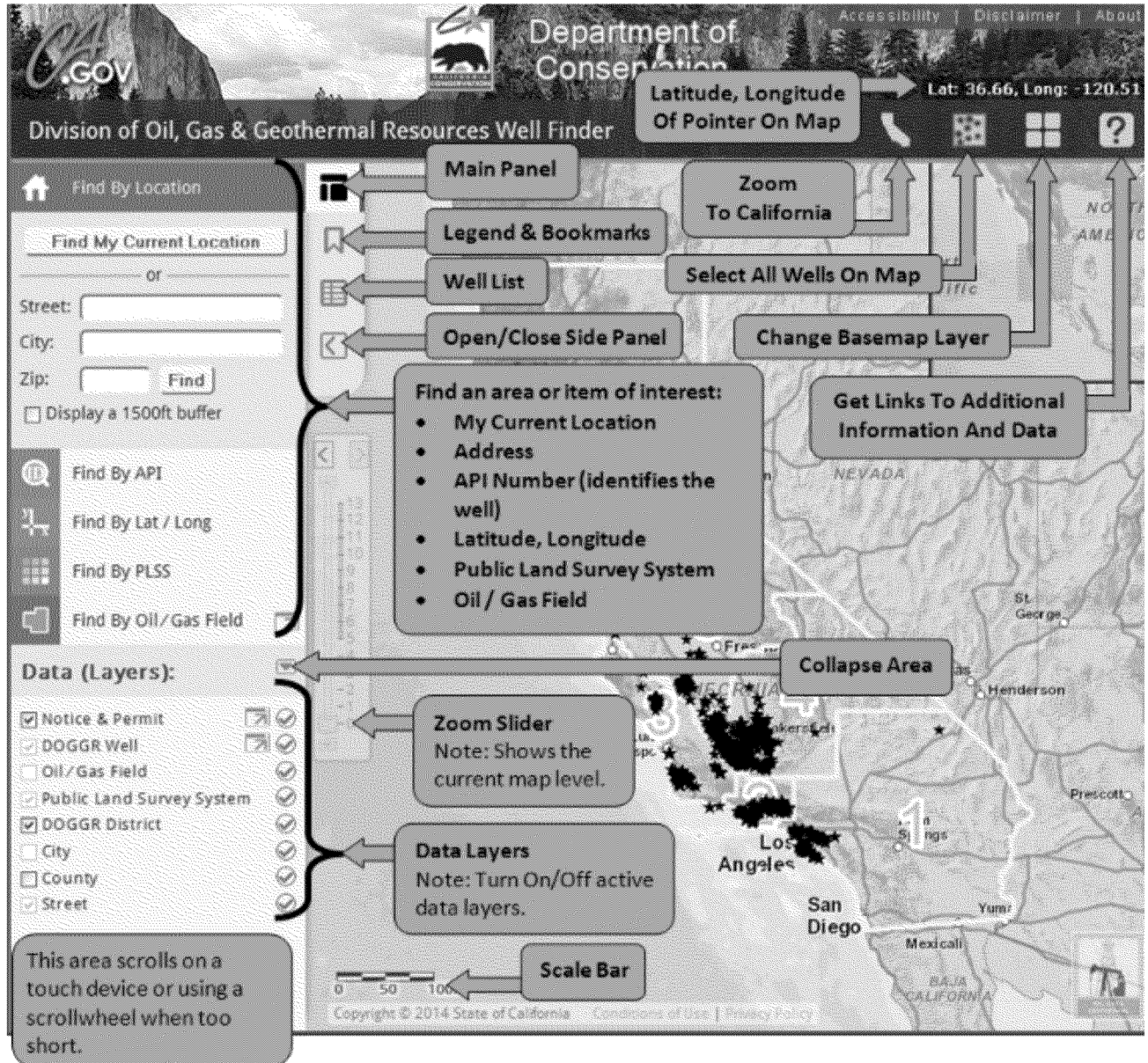# DOGGR Well Finder Help

Quick Overview Look

The DOGGR Well Finder was designed to locate oil and gas wells in your area of interest as well as notices and permits up to one year back.

Looking for something specific?

- Shortcut Keys

- DOGGR Well Finder
- Toolbar Menu (runs across the page above the map):
  - **California Button** - Zooms to California and recenters the map.
  - **Select All Wells Button** - See Detailed Information: Select All Wells.
  - **Basemap Gallery Button** - Change the basemap layer (i.e. the map in the background, behind the data layers).
  - **Help Button** - Get links to additional information and data.
- Find an area or item of interest:
  - **My Current Location** - The browser must support this and you must allow the sharing of this information.
  - **Address** - You can enter any field by itself, but a Street field must also have a City or ZIP code field filled out.
  - **API Number** - See Glossary: API Number.
  - **Latitude, Longitude** - Enter both numbers as positive. (See Detailed Information: Latitude/Longitude for further details.)
  - **Public Land Survey System (PLSS)** - See Glossary: PLSS.
  - **Oil/Gas Field** - Opens a Find By Oil/Gas Field window. Either select the field from the list or type the name in the input box. Typing attempts to match fields in the list. The field must be selected in the list for the search to take place.
- Data Layers (main points):
  - **Notice & Permit** - See Detailed Information: Notice & Permit Layer Settings.
  - **DOGGR Well** - See Detailed Information: DOGGR Well Layer Settings
  - **Unclickable Layers** - **Q:** Why can't I turn some layers on and off?
    A: Some layers are not active at certain map levels and will be greyed out. A tooltip will provide additional information.
  - **Changing Icons** - **Q:** What is the column of icons on the right that change when the map loads?
    A: These icons show the status of each data layer. If the data layer is unavailable then a red "X" will appear.
  - **DOGGR Well Finder Data Layer Info** - This is the technical information behind the data layers on the DOGGR Well Finder.
- Bookmarks:
  - **Built-in Bookmark Map Capability** - See Detailed Information: Built-in Bookmark Map Capability.
- Map Tools (tools found on the map):
  - **Zoom Slider** - See Detailed Information: Zoom Slider.
  - **Scale Bar** - See Detailed Information: Scale Bar.
  - **Overview Map** - See Detailed Information: Overview Map.
- Tips and Tricks
- Detailed Information
- Browser and Device Compatibility
- Glossary
- Feedback/Contact

Back to Top

Shortcut Keys

Side Panel
Click on one of the vertical buttons to open up each area or use one of the shortcuts
Open Main Tab = Ctrl+Alt+1
Legend and Bookmarks = Ctrl+Alt+2
Open Well List = Ctrl+Alt+3

Find By
Go directly to the find:
Find By Address = Ctrl+Alt+A
Find By API = Ctrl+Alt+M
Find By Lat / Long = Ctrl+Alt+L
Find By PLSS = Ctrl+Alt+T
Find By Oil / Gas Field = Ctrl+Alt+F

Close Windows / Panels
The keyboard ESCAPE key closes all open windows and the Side Panel inside the web map.

Back to Top

Tips and Tricks

Navigate the map to a location in California; be sure the map is at level 5 or higher* on the **Zoom Slider** so wells can be visible.
When you find the well(s): **Click** on a well in the Map Area to look up information of an individual well. Click on the bookmark icon button to add the well to a list of bookmarks to access later. Note: The bookmark holds the map extent of the current view so make sure you bookmark the well in a position on the map you want.

* Level 13 is at the top of the Zoom Slider. See Detailed Information: Zoom Slider for information on the level and the scale it represents.

Map Navigation
Map navigation includes both mouse and keyboard interactions.
Map navigation using mouse:

- Drag to pan map by clicking and holding left mouse button.
- Press Shift and click map to recenter on clicked location.
- Use mouse scroll wheel forward to zoom in at current mouse location.
- Use mouse scroll wheel backward to zoom out at current mouse location.
- Press Shift and click and drag to draw a rectangle around an area to zoom in. To

zoom out, press Ctrl and Shift when drawing the rectangle.

Map navigation using keyboard:

- Pan using the arrow keys.
- Press the + key to zoom in at center of map.
- Press the - key to zoom out at center of map.

Back to Top

Detailed Information

Select All Wells	The Select All Wells button adds all wells (does not include Notices and Permits) within the current map extent to the Well List and keeps those wells selected. The button will not remove wells that are already in the Well List. If the map is moved, extent change, this button must be clicked on again to get all the wells in the new map extent. If there are more than 1000 wells within the current map extent, the application will reduce the size of the extent and query again. The process will be repeated until the number of wells found is less than 1000 or the map extent is 20% of its original size. Then, the application prompts the users to decide whether they want to zoom in to the reduced map extent or remain at the current map level. The Select All Wells button only becomes active when wells are visible. Otherwise, the Select All Wells button does not work.
Latitude, Longitude	The Find By Lat / Long is in WGS84 to work with the Web Mercator mapping system, but the Latitude and Longitude stored in the DOGGR data is in NAD83. It is important to keep this in mind when searching for a well location. When doing a Find By Lat / Long, the ranges of both Latitude and Longitude are limited to the extent of California. (That is roughly, $32.0 <$ Latitude < 42.5 and

-125.0 < Longitude < -113.5).
Also, the negative and positive signs are not needed when entering latitude and longitude. The web map assumes signs appropriate to California.

The position information shows the latitude and longitude of the mouse cursor. For a tablet, it will show the position where the map was last tapped on.

Notice and Permit Layer Settings

Filter by Well Notice and Permit Type

Well Notices All Type of Notice and Permit	Show
Drill	☑
Rework	☑
(Re) Abandoned	☑
Supplementary Drill	☑
Supplementary Rework	☑
Supplementary (Re)Abandon	☑
Acid Matrix	☑
Hydraulic Fracture	☑

Apply Filter   **Cancel**

Click on headers to select/unselect rows or columns.
Click on "Well Notices All" to select/unselect all.

The Layer Settings button ⬈ opens a menu that allows users to change the types of notices and permits that show up. On the Layer Settings menu window, select/deselect by type to make notices and permits visible/invisible on the map. By default, all notices and permits are checked and displayed on the map. By clicking on top area of Show, users can select/deselect the entire column of options.

DOGGR Well Layer Settings

Filter by Well Type

			Status		
Well Type	Active	Idle	Plugged	New	Buried
OG	☑	☑	☑	☑	☑
DG	☑	☑	☑	☑	☑
WS	☑	☑	☑	☑	☑
OB	☑	☑	☑	☑	☑
SF	☑	☑	☑	☑	☑
WD	☑	☑	☑	☑	☑
WF	☑	☑	☑	☑	☑
AI	☑	☑	☑	☑	☑
SC	☑	☑	☑	☑	☑
PM	☑	☑	☑	☑	☑
GD	☑	☑	☑	☑	☑
GS	☑	☑	☑	☑	☑
LG	☑	☑	☑	☑	☑
GT	☑	☑	☑	☑	☑

Show Confidential Wells Only: ☐

Apply Filter   **Cancel**

Click on headers to select/unselect rows or columns.
Click on "Well" to select/unselect all.

The Layer Settings button ⬈ opens a menu that allows users to change the types of wells that show up. On the Well Filter menu window, select/deselect by well type and/or well status to make wells visible/invisible on the map. By default, all wells are checked and displayed on the map. A well type or a well status can be clicked on to select/deselect an entire row or column. By clicking on Well at the upper left corner, users can select/deselect the entire grid of options. In addition, a tooltip appears when the mouse pointer hovers over a Well Type.
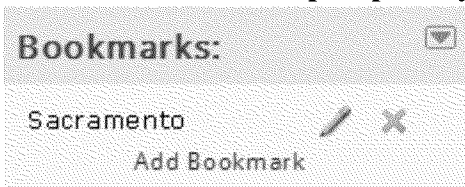(See Detailed Information: Well Types.)
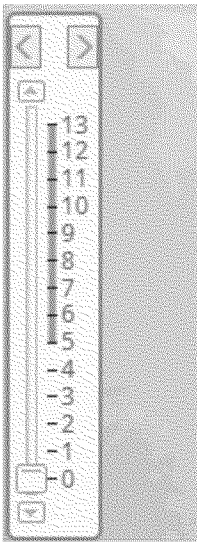
Well Types

Well Type	Description

OG	Oil & gas - production
DG	Dry gas - production
WS	Water source - production
OB	Observation well
SF	Steamflood - injection
WD	Water disposal - injection
WF	Waterflood - injection
AI	Air injection
SC	Cyclic steam - injection
PM	Pressure maintenance - injection
GD	Gas disposal - injection
GS	Gas storage - production & injection
LG	Liquefied gas - production & injection
GT	Geothermal

Built-in Bookmark Map Capability

Bookmarks:

Sacramento ✏ ✕

Add Bookmark

- Option 1: Bookmark from Details side panel
  - Open the Details side panel.
  - Use a Bookmark: Click on the name.
  - Add a Bookmark: Click on "Add Bookmark" and enter a name for the bookmark. The bookmark will be of the current map extent.
  - Edit a Bookmark name: Click on the pencil icon and edit the name of the bookmark.
  - Delete a Bookmark: Click on the "X" icon and the bookmark is instantly deleted.

- Option 2: Bookmark from Well InfoWindow (See Glossary: Well InfoWindow.)
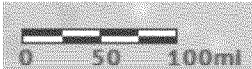 - Click the Add Bookmark Icon on

	the Well InfoWindow. ○ A bookmark is added to the Bookmarks list with the API and the Details side panel opens if not already open showing the Bookmarks panel. • Option 3: Bookmark Keyboard Shortcut 　○ **Keyboard shortcut:** Ctrl+Alt+B 　○ The keyboard shortcut will put in a temporary name (in the format of "Bookmark" + an increasing number) that you can change with an edit. The bookmark is of the current map extent. 　○ The keyboard shortcut opens the Details side panel if not already open showing the Bookmarks panel. Note: Browsers that support local storage will store the bookmarks to the local computer. Browsers that do not support local storage will attempt to save a cookie. These methods allow the saving of the bookmarks so you can continue to use them even if you close the browser. If you use a different browser or you clear out your local storage/cookies then you will lose your bookmarks.
Zoom Slider	Zoom Slider is used to zoom in/out and to indicate the current map level. The blue bar indicates those levels (5 to 13) where wells are visible. Notices and Permits are visible at all levels. The two arrow buttons at the top of the Zoom Slider provide access to the Previous/Next map extents.

Level ID	Scale
13	1:1,128

12	1:2,257
11	~1:4,500
10	~1:9,000
9	~1:18,000
8	~1:36,000
7	~1:72,000
6	~1:140,000
5	~1:290,000
4	~1:580,000
3	~1:1,155,000
2	~1:2,300,000
1	~1:4,600,000
0	~1:9,200,000

Footnote: Wells are only visible on the map at level 5 and higher. Notices and Permits are visible at all levels.
For detailed information on ESRI's basemaps used in the DOGGR Well Finder, visit the Data Information page and click on the links for the ESRI basemaps.
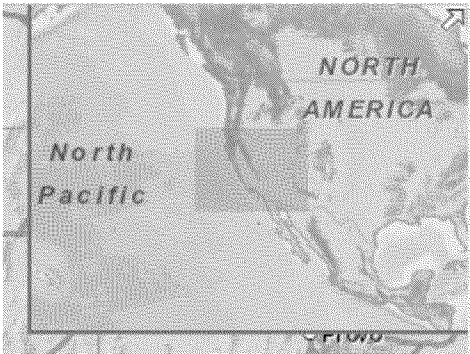
Map Scale Bar

A map element is used to graphically represent the scale of the map defined as the ratio of a distance on the map to the corresponding distance on the ground. The map scale bar will change dynamically based on the map extent, the map scale, and the latitude.

For projection information and a known issue when using the scale bar, read Additional Information.

Overview Map

The Overview Map uses the same background image as the basemap. The green rectangle inside the Overview Map represents the map extent of the Map Area. You can click and drag the green rectangle to move the main map to a location of interest.

Opening and closing the Overview Map: Click on the arrow in the top right corner of the Overview Map to control the Overview Map

	being open or close. The Overview Map is open by default.

DOGGR Well Legend

- ⚌ New
- ● Active Producer
- ⬤ Active Injector
- ⬗ Dry Hole
- ⬥ Plugged
- ▲ Geothermal
- ★ Notice & Permit

Well symbols are based on a combination of Well Types and Well Status.

Road Legend

- ▬▬ Highway
- ▬▬ Major Road
- ‒‒‒ Street
- ⎯⎯ Drive
- ▬▬ Ramp/Rest Area
- ░░░ Parking Lot
- ‒ ‒ ‒ Alley/Walkway
- ▬▬ Dirt Road

The road legend at levels 12 and 13

Note: At levels 12 and 13, ESRI Street Map is currently only available in urban areas. Therefore, DOC provides its own GIS services to replace ESRI Street Map at levels 12 and 13.

Back to Top

Additional Information

- Well data and Permit and Notice data is updated nightly.
- Well production data is only available since 1977.
- See Browser and Device Compatibility for browser specific details.
- The link to Well Information from the Well InfoWindow provides detailed information fom the Well Finder geodatabase. Scrolling is required to view all of the well informatio. Internet Explorer is the only browser that allows direct copy to the clipboard. All ther browsers, require a user to select all the text and then manually doing a copy to theclipboard (Crtl + C).
- The modified Mercator projection used by Google, Bing, and ArcGIS Online is not designto minimize distortion. Instead, the projection based on a perfect sphere sacrifices some accuracy for convenience working with cached map tiles. As the result, the farther away from the Equator, the more distortions (of shapes, areas, directions, and/or distancs) are evident. This means that measuring distance using ESRI's built-in scale bar can be inaccurate. For more information: visit the ESRI blog post "Measure distances and areas

when your map uses the Mercator projection"

Back to Top

Browser and Device Compatibility

- The Well Finder is optimized for Internet Explorer 8, Internet Explorer 11, Firefox 35+, Chrome 4+, and Safari 3+. (It does not work with Internet Explorer 9 and 10.)
- The Well Finder has been tested to run on tablets such as the iPad and Android tablet Android tablets are treated the same as the browser version since not all Android devices support the multi-touch capabilities. The iPad and other devices will not show the zoom slider.
- A high speed wireless connection is necessary for the Well Finder to operate properlyon tablets and other wireless devices.

Back to Top

Glossary

API Number
American Petroleum Institute Well Number (also called **API**) is a unique, permanent, numeric identifier assigned to each oil and gas well in the US. An API Well number canhave up to 14 digits divided into State Code (2 digits), County Code (3 digits), Unique Well Identifier (5 digits), Directional Sidetrack Code (2 digits), Event Sequence Code (2 digits). Currently, API Numbers in the DOGGR Well Finder database consist of 8 digits - County Code (first 3 digits) and Unique Well Identifier. For more information: visit the Wikipedia page on the API Well Number

District Number
DOGGR splits up California by districts. [See the DOGGR Contact Page for information about the different districts and the contacts.]

DOC
California Department of Conservation

DOGGR
Division of Oil, Gas, and Geothermal Resources

ESRI
Environmental Systems Research Institute - A company that provides GIS/Mapping software and spatial data/services.

InfoWindow
An InfoWindow is a popup with information about a well or notice and permit when theyare selected or clicked on.

Map Extent
The "extent" of the map is the entire rectangular area of the Map Area. The extent changes as you pan, zoom, or use a Find tool. The map elements (e.g. zoom slider, overveiw map,map scalebar, copyright notice and links, and logo) do not affect the extent of the map.

OPI

Online Production/Injection

OWRS

Online Well Record Search

PLSS

The Public Land Survey System is the surveying method used historically over the largest fraction of the U.S. to survey land parcels before designation of ownership. For more info, visit the National Atlas Page on the Public Land Survey System.

Additional glossary information can be found through the OSHA - Oil and Gas Well Drilling and Servicing eTool.

Back to Top

Feedback/Contact Info

doggrwebmaster at conservation.ca.gov
Note: Replace 'at' with '@' to send e-mail.

Back to Top